

WHAT IS CLAIMED IS:

1. A print apparatus, comprising:
  - a first primary color chamber;
  - a second primary color chamber;
  - 5 a custom color chamber;
  - a first pump operative to dispense a measured amount of ink from the first primary color chamber to the custom color chamber;
  - a second pump operative to dispense a measured amount of ink from the second primary color chamber to the custom color chamber; and
  - 10 a print head operative to print with ink from the custom color chamber.
2. The print apparatus of claim 1, comprising n primary color chambers, where n is an integer number greater than 2.
3. The print apparatus of claim 1, comprising n custom color chambers, where n is an integer number greater than 1.
- 15 4. The print apparatus of claim 1, comprising a purging fluid reservoir and a purging fluid source operative to purge the custom color with purging fluid.
5. The print apparatus of claim 1, at least one low level sensor positioned to sense a low fluid level in at least one of the first primary color chamber, the second primary color chamber, and the custom color chamber.
- 20 6. The print apparatus of claim 5, comprising a controller operative to halt printing by the print head in response to the at least one low level sensor sensing a low fluid level and to notify a print apparatus operator.
7. The print apparatus of claim 5, comprising a controller operative to halt printing by the print head in response to the at least one low level sensor sensing
- 25 a low fluid level.

8. The print apparatus of claim 1, comprising a purging fluid reservoir and a purging fluid pump operative to purge the print head with purging fluid.
9. The print apparatus of claim 8, at least one low level sensor positioned to sense a low fluid level in the purging fluid reservoir.
- 5 10. The print apparatus of claim 8, comprising a controller operative to halt printing by the print head in response to the at least one low level sensor sensing a low fluid level.
11. The print apparatus of claim 1, comprising:  
a purging fluid reservoir;  
10 a purging fluid pump operative to direct purging fluid from the purging fluid reservoir to a feed valve;  
the feed valve being operative to alternatively direct purging fluid from the purging fluid pump or ink from the custom color chamber to the print head.
12. The print apparatus of claim 1, comprising:  
15 a purging fluid reservoir;  
a purging fluid pump operative to direct purging fluid from the purging fluid reservoir to a feed valve;  
the feed valve being operative to alternatively direct purging fluid from the purging fluid pump or ink from the custom color chamber to the print head without  
20 generating bubbles in the feed valve.
13. The print apparatus of claim 1, comprising a dispensing valve operative to dispense a predetermined quantity of ink into the custom color chamber.
14. The print apparatus of claim 1, comprising an ink sensor positioned to sense a color of ink in the custom color chamber.
- 25 15. The print apparatus of claim 14, comprising a controller operative to report the color of ink in the custom color chamber to a print apparatus operator.
16. The print apparatus of claim 1, comprising:

a controller operative to induce dispensing of ink from one or more of the primary color chambers into the custom color chamber in order to match a color of ink in the custom color chamber to a predetermined custom color of ink.

17. The print apparatus of claim 1, comprising:

5 an ink sensor positioned to sense a color of ink in the custom color chamber; and

a controller operative to induce dispensing of ink from one or more of the primary color chambers into the custom color chamber in order to match the color of ink in the custom color chamber to a predetermined custom color of ink  
10 with feedback from the ink sensor.

18. The print apparatus of claim 1, comprising a print sensor positioned to sense a color of ink printed by the print head.

19. The print apparatus of claim 18, comprising a controller operative to report the color of ink printed by the print head to a print apparatus operator.

15 20. The print apparatus of claim 1, comprising:

a controller operative to induce dispensing of ink from one or more of the primary color chambers into the custom color chamber in order to match a color of ink printed by the print head to a predetermined printed color of ink.

21. The print apparatus of claim 1, comprising:

20 a print sensor positioned to sense a color of ink printed by the print head; and

a controller operative to induce dispensing of ink from one or more of the primary color chambers into the custom color chamber in order to match the color of ink printed by the print head to a predetermined print color with feedback  
25 from the print sensor.

22. The print apparatus of claim 1, the custom color chamber being removable from the print apparatus.

23. A printing process, comprising:  
dispensing a first primary color ink to a custom color chamber associated  
with a print head;  
dispensing a second primary color ink to the custom color chamber;  
5 mixing the first primary color ink and the second primary color ink to create  
a custom color ink; and  
printing the custom color ink from the custom color chamber with a print  
head.
24. The printing process of claim 23, comprising swapping the custom color  
10 chamber with another custom color chamber having another custom color ink  
and printing the another custom color ink from the another custom color chamber  
with the print head.
25. The printing process of claim 23, comprising:  
changing the color of ink printed by the print head; and  
15 sensing a color of ink printed by the print head to verify the changing of  
the color of ink printed by the print head.
26. The printing process of claim 23, comprising:  
verifying a change of the custom color to another custom color by printing  
the another custom color on at least one receiver with the print head.
- 20 27. The printing process of claim 26, comprising directing the at least one  
receiver to a different destination than a bulk of receivers printed with the custom  
color.
28. The printing process of claim 23, comprising:  
verifying purging with purging fluid by printing the purging fluid on at least  
25 one receiver with the print head.
29. The printing process of claim 28, comprising directing the at least one  
receiver to a different destination than a bulk of receivers printed with the custom  
color.

30. The printing process of claim 23, comprising sensing a low fluid level in at least one of the first primary color chamber, the second primary color chamber, and the custom color chamber.
31. The printing process of claim 29, comprising:  
5 halting printing by the print head in response to sensing the low fluid level;  
and  
notifying a print apparatus operator.
32. The print process of claim 29, comprising halting printing by the print head in response to sensing the low fluid level.
- 10 33. The print process of claim 23, comprising:  
a purging reservoir, and;  
sensing a low fluid level in the purging reservoir.
34. The printing process of claim 33, comprising halting printing by the print head in response to sensing the low fluid level.
- 15 35. The printing process of claim 23, comprising directing a purging fluid or the custom color ink to the print head.
36. The printing process of claim 23, comprising sensing a color of ink in the custom color chamber.
37. The color print apparatus of claim 36, comprising reporting the color of ink  
20 in the custom color chamber to a print apparatus operator with a controller.
38. The printing process of claim 23, comprising:  
dispensing the first primary color ink and the second primary color ink into the custom color chamber in order to match a color of ink in the custom color chamber to a predetermined custom color of ink.
- 25 39. The printing process of claim 23, comprising:  
sensing a color of ink in the custom color chamber; and

dispensing ink into the custom color chamber in order to match a color of ink in the custom color chamber to a predetermined custom color of ink with feedback from the ink sensor.

5 40. The printing process of claim 23, comprising sensing a color of ink printed by the print head.

41. The color print apparatus of claim 40, comprising reporting the color of ink printed by the print head to a print apparatus operator with a controller.

42. The printing process of claim 23, comprising:  
10 dispensing a predetermined quantity of the first primary ink color and a predetermined quantity of the second primary ink color into the custom color chamber in order to match a color of ink printed by the print head to a predetermined printed color of ink.

43. The printing process of claim 23, comprising:  
15 sensing a color of ink printed by the print head; and dispensing ink into the custom color chamber in order to match a color of ink printed by the print head to a predetermined printed color of ink with feedback from the print sensor.

44. The printing process of claim 23, comprising removing the custom color chamber from the color print apparatus.

20 45. The print process of claim 23, comprising:  
alternatively directing purging fluid from a purging fluid source or ink from the custom color chamber through a feed valve to the print head without generating bubbles in the feed valve.

25 46. A printing process, comprising:  
dispensing a predetermined quantity of first primary color ink from a primary color ink chamber to a custom color chamber associated with a print head;

dispensing a predetermined quantity of second primary color ink from a primary color ink chamber to the custom color chamber;

mixing the predetermined quantity of first primary color ink and the predetermined quantity of second primary color ink to create a custom color ink;

5        printing the custom color ink from the custom color chamber with a print head.